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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/653,437	09/01/2000	Jiuzhi Xue	57-00	5513
23713	7590	06/10/2004	EXAMINER	
GREENLEE WINNER AND SULLIVAN P C			HANNAHER, CONSTANTINE	
5370 MANHATTAN CIRCLE			ART UNIT	PAPER NUMBER
SUITE 201				2878
BOULDER, CO 80303				

DATE MAILED: 06/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/653,437	XUE ET AL. <i>[Signature]</i>	
	<b>Examiner</b>	<b>Art Unit</b>	
	Constantine Hannaher	2878	

-- The MAILING DATE of this communication app ars on the cover sh et with the correspondenc address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 20 November 2003.  
 2a) This action is **FINAL**.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-52 is/are pending in the application.  
 4a) Of the above claim(s) 1-41 is/are withdrawn from consideration.  
 5) Claim(s) 43 is/are allowed.  
 6) Claim(s) 42 and 44-52 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) 1-52 are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 20 November 2003 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>20031120</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### **Election/Restrictions**

1. This application contains claims 1-41 drawn to an invention nonelected with traverse in the reply filed on April 24, 2003. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.
2. Newly submitted claim 52 is directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: the species of x ray scattering analysis is distinct from the species of infrared dichroism measurements.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claim 52 is withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

However, claim 52 is nevertheless addressed on the merits under 35 U.S.C. 112, first paragraph below.

### **Information Disclosure Statement**

3. The information disclosure statement filed November 20, 2003 fails to comply with 37 CFR 1.98(a)(1), which requires a list of all patents, publications, or other information submitted for consideration by the Office. It has been placed in the application file, but the information referred to therein has not been considered.

Note the error in identifying the European patent publication.

### **Drawings**

4. The drawings were received on November 20, 2003. These drawings are acceptable.

**Claim Rejections - 35 USC § 112**

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claim 52 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification does not describe that observation using x ray scattering is determinative of the presence of the specifically recited material phase. Instead, x ray scattering measurements would appear to relate to measurement of a SmA-SmC\* transition. Since the specifically recited material phase has properties that are "very different from a conventional" SmA phase, one skilled in the art does not apprehend that the disclosure encompassed x ray scattering measurement for the determination of the specifically recited material phase.

7. Claims 42 and 44-52 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for determining the specifically recited material phase by making infrared dichroism measurements, does not reasonably provide enablement for any other method of determining. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims. Clearly, one skilled in the art would have to experiment unduly to discern what methods of determination are capable of determining the presence of the specifically recited material phase. As pointed out in the rejection of claim 52, x ray scattering measurements are not described by the specification as useful in determining the presence of the specifically recited material phase.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 42-51 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The sole disclosed species of "determining" provided by the specification is application of infrared dichroism measurement (page 14). As pointed out in the rejection of claim 52, x ray scattering measurements are not described by the specification as useful in determining the presence of the specifically recited material phase. Accordingly, the specification does not support any distinction between the determination of claim 42 and the determination of claim 43. Since the scope of two claims in the same application cannot be coextensive, and since it is not apparent what might and what might not constitute a determination under claim 42 other than the determination of claim 43, the claims are indefinite.

### **Response to Submission(s)**

10. The amendment filed November 20, 2003 has been entered. The delay in associating the amendment is regretted.

### **Allowable Subject Matter**

11. Claim 43 is allowed.

12. No statement of allowability can be made for claims rejected under 35 U.S.C. 112, first paragraph.

**Conclusion**

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Constantine Hannaher whose telephone number is (571) 272-2437. The examiner can normally be reached on Monday-Friday with flexible hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

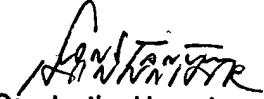
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Constantine Hannaher  
Primary Examiner